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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/731,093	12/10/2003	Yong Cheol Park	0465-1109P	4509
2292 7590 11/06/2007 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER GUPTA, PARUL H	
			ART UNIT	PAPER NUMBER
			2627	
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			11/06/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No. 10/731,093	Applicant(s) PARK ET AL.	
	Examiner Parul Gupta	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8/20/07.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12, 18 and 19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12, 18, 19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-12 and 18-19 are pending for examination as interpreted by the examiner. The amendment and arguments filed on 8/20/07 were considered.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. Claims 1-3, 6-9, and 18-19 are rejected under 35 U.S.C. 102(a) as being anticipated by Takano et al., US Patent 5,448,728.

Regarding claim 1, Takano et al. discloses a method of managing overwrite on a write-once optical disc (column 1, lines 40-45), comprising: writing replacement-recording data, which is requested to be overwritten in a specified area of the disc where recording is completed (column 1, lines 60-61), from a rear of a user data area of the disc (column 6, lines 2-6); and recording first information on a last logical sector number of the user data area, which is changed in accordance with the replacement recording operation (column 6, lines 8-10), in a management area of the disc (column 6, lines 58-63); and recording second information indicating positions of the specified area and the replacement-recorded area portion, in the management area of the disc, wherein the first information and the second information are recorded at a same update time after the writing of the replacement-recording data is performed (column 6, lines

17-27). The information stored in the management area indicates the positions and is the second information. The first information is the beginning ID of the information.

Regarding claim 2, Takano et al. discloses the method of claim 1, wherein the last logical sector number of the user data area is obtained by updating information on a previous last logical sector number of the user data area (column 6, lines 17-27).

Regarding claim 3, Takano et al. discloses the method of claim 1, wherein the last logical sector number of the user data area is recorded as new management information while information on a previous last logical sector number of the user data area is maintained (column 7, lines 5-7).

Regarding claim 6, Takano et al. discloses in figure 10B a method of managing overwrite on an optical disc write once (column 1, lines 40-45), comprising: writing replacement-recording data, which is requested to be overwritten in a specified area of the disc where recording is completed (column 1, lines 60-61), in an area preceding an outer spare area of the disc ("B AREA"); extending the outer spare area as large as a size of a replacement-recorded area (column 6, lines 8-10); and recording first information on a last logical sector number of the user data area, which is changed in accordance with the extension of the outer spare area, in a management area of the disc (column 6, lines 58-63); and recording second information indicating positions of the specified area and the replacement-recorded area, in the management area of the disc, wherein the first information and the second information area recorded at a same update time after the writing of the replacement-recording data is performed (column 6,

lines 17-27). The information stored in the management area indicates the positions and is the second information. The first information is the beginning ID of the information.

Regarding claim 7, Takano et al. discloses in figure 10B a method of managing overwrite on a write-once optical disc (column 1, lines 40-45), comprising: writing replacement-recording data, which is requested to be overwritten in a specified area of the disc where recording is completed (column 1, lines 60-61), in an outer spare area of the disc ("B AREA"); determining whether to extend the outer spare area in consideration of a size of a replacement-recorded area (column 6, lines 8-10); and recording first information on a last logical sector number of the user data area, which is changed in accordance with the determination of the extension of the outer spare area, in a management area of the disc (column 6, lines 58-63); and recording second information indicating positions of the specified area and a replacement-recorded area of the outer spare area, in the management area of the disc, wherein the first information and the second information are recorded at a same update time after the writing of the replacement-recording data is performed (column 6, lines 17-27). The information stored in the management area indicates the positions and is the second information. The first information is the beginning ID of the information.

Regarding claim 8, Takano et al. discloses the method of claim 7, wherein whether to extend the outer spare area is determined before the replacement recording operation. Column 6, lines 8-10 explains that the determination of whether or not to extend the area occurs while judgment is being made of where to write the data, during the updating step, before actually writing the data.

Regarding claim 9, Takano et al. discloses the method of claim 7, wherein whether to extend the outer spare area is determined during initialization of the disc. Column 6, lines 8-10 explains that the determination of whether or not to extend the area occurs while judgment is being made of where to write the data, during the updating step, before actually writing the data. This is during the initialization or formatting period before writing, even if not the initial formatting of the disc.

Regarding claim 18, Takano et al. discloses an apparatus for recording/reproducing an optical disc write once (figure 1), comprising: a recording device for judging whether a specified area is an already recorded area or a non-recorded area (column 6, lines 21-23), and if it is judged that the specified area is the already recorded area, writing data, requested to be overwritten in the specified area, in a replacement area of a data area and recording first information on a last logical sector number of a user data area, and recording second information indicating positions of the specified area and the replacement area, wherein the first information and the second information are recorded at a same update time after the writing operation is performed (column 6, lines 17-27 where the information stored in the management area indicates the positions and is the second information. The first information is the beginning ID of the information), and the last logical sector number of the data area is changed by the writing operation (column 6, lines 17-27).

Regarding claim 19, Takano et al. discloses a recording medium, comprising: a data area ("storage area" as given in column 7, line 32) including a user data area being usable as a replacement area, wherein the replacement area is assigned when writing

data requested to be overwritten in a specified area of the user data area; and at least one management area (where "management data" of column 7, lines 52-59 is written) for storing first information including a last logical sector number of the user data area (location of data as given in column 2, lines 9-10) and second information indicating positions of the specified area and the replacement area, wherein the first information and the second information are recorded at a same update time after the writing operation is performed (column 6, lines 17-27 where the information stored in the management area indicates the positions and is the second information. The first information is the beginning ID of the information), and last logical sector number of the user data area is changed by the assigned replacement area (column 6, lines 2-27).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 4-5 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takano et al. in view of Miyamoto et al., US Patent 5,867,455.

Takano et al. teaches the limitations of independent claim 1 as set forth above.

Regarding claim 4, Takano et al. further teaches the method of claim 1, wherein the optical disc write once is a type of optical disc write once, to which the method is applied in the same manner. However, Takano et al. does not but Miyamoto et al. teaches that the disc is a dual-layer type disc in column 2, lines 25-26.

Regarding claim 5, Miyamoto et al. further teaches a method, wherein the dual layers have user data areas consecutively given like one recording layer. Column 2, lines 25-42 explain the interaction between the first and third layers that help them operate as one layer. As the second layer is optional, the disc given only has dual layers.

Regarding claim 10, Takano et al. discloses a method of managing overwrite on an optical disc write once (column 1, lines 40-45), comprising: selectively writing replacement-recording data, which is requested to be overwritten in a specified area of the disc where recording is completed (column 1, lines 60-61), in a user data area of the respective recording layer of the disc; and recording first information on a last logical sector number of the user data area of the respective recording layer, which is changed in accordance with the replacement recording operation, in a management area of the disc (column 6, lines 58-63); and recording second information indicating positions of the specified area and a replacement-recorded area of the user data area, in the management area of the disc, wherein the first information and the second information are recorded at a same update time after the writing of the replacement-recording data is performed (column 6, lines 17-27). The information stored in the management area indicates the positions and is the second information. The first information is the beginning ID of the information. However, Takano does not but Miyamoto does teach a disc having a plurality of recording layers in column 2, lines 25-26.

Regarding claim 11, Takano et al. further discloses a method, wherein the last logical sector number of the user data area of the respective recording layer is obtained

by updating information on a previous last logical sector number of the user data area of the respective recording layer (column 6, lines 17-27).

Regarding claim 12, Takano et al. further discloses a method, wherein the last logical sector number of the user data area of the respective recording layer is recorded as new management information while information on a previous last logical sector number of the user data area of the respective recording layer is maintained as it is (column 6, lines 58-63).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include the concept of a dual layer disc having user data areas as taught by Miyamoto et al. into the system of Takano et al. The motivation would be to be effective in a read only memory (column 2, lines 38-42 of Miyamoto et al.) while storing more information than standard single layer discs.

Response to Arguments

4. Applicant's arguments with respect to all claims have been considered but are not persuasive.

Applicant contends that Takano et al. nor Miyamoto disclose recording information on a last logical sector number of the user data area nor changing this information in accordance with the writing operation or replacement-recording operation for data requested to be overwritten, the extension of the outer spare area, the determination of the extension of the outer spare area. However, as the management data is recorded immediately after the data, it is recorded at the last logical sector number of the user data area as given in column 7, lines 39-40. As for the determination

and extension of the outer spare area, the management area is variable, making the area extendable as given in column 6, lines 2-10. Although Takano is directed to a different idea, Takano still performs the same function in the same way.

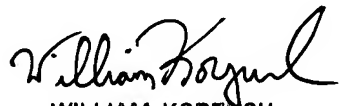
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Parul Gupta whose telephone number is 571-272-5260. The examiner can normally be reached on Monday through Thursday, from 9:30 AM to 7 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bill Korzuch can be reached on 571-272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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